

# THE MINING AND METALLURGICAL JOURNAL.

FORMERLY THE PACIFIC COAST BULLION.

Vol. XV., No. 8

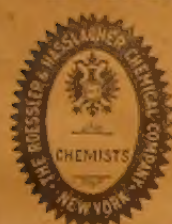
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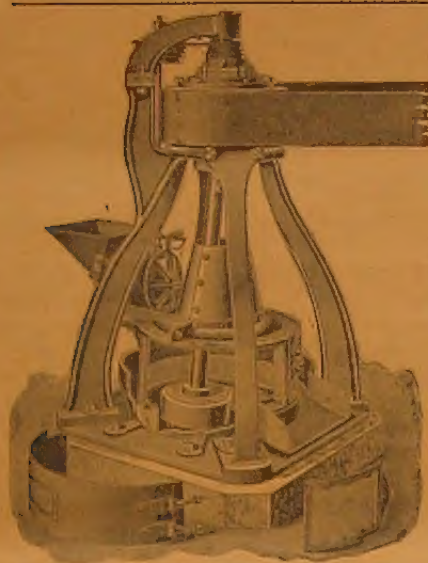
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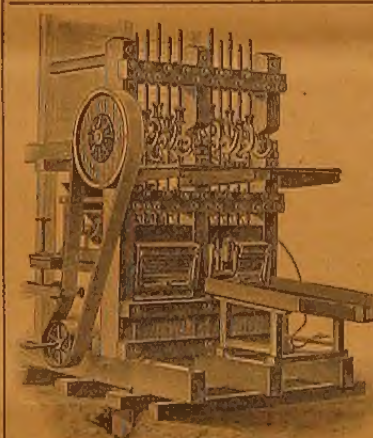
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GET YOUR NAME ON THE LIST OF VOTERS.

We have to remind our readers that if they do not register they cannot vote. If you delay longer than August 19th, you will be debarred from voting. Every miner and person interested in mining, and every person who has the best interests of this country at heart ought to register and vote in the interests of free coinage of silver. It is the American policy, and in the interests of all American industries, whether railways, agricultural, manufacturing or mining.

WHERE MONEY IS NEEDED.

Statisticians assert \$800,000,000 is required to carry on the retail trade of the United States. No doubt they are approximately correct. It constitutes the largest percentage of the domestic commerce of the country. No foreign interests are connected with our retail trade, or, in other words, inter-national commerce has nothing to do with it. The medium of exchange employed in it is purely domestic, and, whatever it may be, no injury can result to any of our people, for what is good money for one is good money for another.

What the country most needs is a sufficient volume of money to accommodate the domestic commerce, this retail trade.

The coinage of silver will increase the money volume, and will accommodate those who are parties to the retail trade. If, as claimed, this trade requires \$800,000,000, the circulation of silver to that amount is practicable, and it would do no harm to any of our people, nor would it interfere in the slightest degree with the foreign commerce. But, if our money volume is limited solely with a view to accommodate foreign trade, then it must of necessity be too small to supply the wants of domestic business.

GONE TO EUROPE.

On the 2nd of this month, Chauncey M. Depew sailed for Europe, and the dispatches announce that he will spend nine weeks in consultation with European financiers and in studying European financial systems that he may intelligently discuss the money question in the present campaign.

Dewey is one of the representatives of the gold bugs, and no doubt he wants to obtain European ideas, in order to enlighten the American voters as to the wishes of Rothschild and the gold trust. Our troubles are and the danger of retrogression in our institutions and civilization is that we look to European rather than to our own interests. It would seem to be wise to adopt policies adapted to our own rather than foreign conditions.

## WHAT IS THE PROBLEM?

It may be said to be, how shall we give ample employment to all our people, with American wages? This certainly cannot be done by purchasing from other people what is practicable for us to produce, nor will we have done what is important in the direction indicated till we have created and sail a merchant marine capable of doing our own transportation on the high seas.

We will have need to do more than these before all our people will be given the employment which the highest prosperity of the country demands. We must open our mines and operate them to the fullest capacity. Our mining interests are so comprehensive that their development will give employment to large numbers. Silver mining is no small item.

These things cannot be done without money. The largest number of enterprises will not be entered upon without an adequate volume of money, and, consequently, without it there will be inability to afford the largest quantum of employment. As a first consideration, let us have a policy that will give the country a sufficiency of money.

## THE WHITNEY LETTER.

Mr. William C. Whitney, former secretary of the navy under Cleveland, and a marital relation of the Standard Oil Company, has addressed a letter to the Democrats of the country, advocating the adoption of the gold standard by the Chicago convention. It might be expected that this resident of Wall street, and who is related, as above stated, would be for the Rothschild measure. One of his arguments, if it may be thus dignified, is curious indeed.

He points out the growth of bimetallism in Europe, and especially in France and Germany, and which promises at no distant day to cause the double standard to be adopted over there; if this country will not agitate the question; but he solemnly alleges that if the United States should adopt free silver coinage, it will frighten the bimetallists of Europe and defeat the object they have in view.

Though we presume the object is clear to Mr. Whitney, still, to the ordinary and unsophisticated mind, it will appear strange that doing just what the bimetallists of Europe want to have done, will be like throwing a bucket of ice water on their efforts, and will cause the advocacy of silver to cease.

This may be regarded as a specimen of the humbug reasons that will be urged for gold. The goldites have already threatened to com-

mit financial tragedies in defence of the single parrow standard, and they will supplement such threats with the performance of every species of comedy. Mr. Whitney has gone through the first act and we shall wait for the next, not even allowing ourselves to conjecture what it may be.

## NICKEL VERSUS SILVER

*The Mining and Scientific Press* is authority for the statement that "the United States mint at Philadelphia is experimenting on the adaptability of pure nickel, aluminum and other metals for use in the minor coinage of the United States. It is possible that in the event of pure nickel being found superior to the alloy now used for the 5 cent piece, an effort may be made to have its exclusive use authorized for the minor coinage of the country." The exclusive use of pure nickel cannot be upheld by the constitution of the United States, which says that the money of this country shall be gold and silver. As there is no nickel ore mined in the United States at the present time, and as nickel is admitted free of duty, and has to be imported as ore or matte from Canada, or New Caledonia, a French Penal settlement, or from Europe in the refined condition, the use of nickel for the United States coin becomes a question worthy of discussion.

At the present time, when the more extended use of silver is desirable, we are inclined to question the necessity or desirability of importing a foreign mineral or metal for use as United States coin. This is more apparent, as Canada, which produces the largest amount of nickel in the world, does not use it for 5 cent pieces, but uses silver. The nickels at present in use weigh 77.16 grains, and are composed of 75 per cent copper and 25 per cent nickel, and to increase the use of foreign nickel by using the pure nickel alone is not improving trade in an American metal, but in a foreign ore or metal. A more necessary and possibly as good an alloy could be made with American silver and aluminum, as both metals are produced in the United States, if it is not desired to use silver alone. There is no branch of the coinage of the mint so profitable as the production of small coin, as the percentage of loss in trade or general circulation is greatest in proportion as the coins decrease in size.

The nickel and copper coins at present in circulation in the United States amount to twenty millions of dollars, and if all the nickels now in use were called in, and a substitute made of 5 cent pieces of silver alone, or silver aluminum alloy, the desirable object of a more extended use of American silver would be attained. Several million dollars of American silver can be used in this very desirable way, in place of the purchase of nickel, even if pure and introduced by way of "Cleveland," and free from duty, and in aid of foreign mining.

A few years ago, when the Cumberland Gap, Pa., nickel mine was in operation, the case was different, but, as this mine is exhausted, there is no necessity for the use of foreign nickel, when we have a better substitute to use, and one which is authorized under the United States Constitution for use in our minor coin. Here is a use for some of the uncoined silver at present stored in the mints of the United States, if Ohio nickel wire pullers have not too strong a pull on nickel, and present an impregnable barrier as they did in the case of nickel steel armour plates of Canadian nickel.



## ENGLISH MONEY.

One of the arguments used in support of the adoption of the gold plank in the St. Louis platform was that, if this were done, we could get English money for investment in this country. This very statement is an admission that the country needs more money—a fact that the silver men have presented for several years. It would seem that we have had quite enough experience in relying on British money.

For thirty years, we have procured money from the other side of the Atlantic to build our railroads and carry on our other enterprises. We have been paying interest and dividends on foreign capital, when, if we had used our own resources, we could have had all the money required to carry on necessary enterprises. Pay day comes and then there is a realization of the folly of borrowing, particularly when we could have got along without it.

By reason of our dependence on foreign money, our policies have been to a most hurtful extent controlled in foreign interests.

The idea is ridiculous that a nation of 70,000,000 of the most enlightened and energetic people on earth, occupying 3,000,000 square miles of territory, which embraces nearly every climate, soil and production, that leads the world in the production of gold and silver, should be beholden to any country for capital, for actual money to conduct its business and enterprises. Who that has any sense can be willing to further complicate affairs and embarrass our situation by borrowing of the British, or by inviting them to invest their money in our most profitable enterprises. Yet a great political party has adopted a platform, in part at least, to facilitate the introduction of more British money. Let us become Americans, or, in other words, become re-Americanized.

Our industries will never be developed to such proportions as the best interests of the country demands of the home to depend upon foreign capital. The mere act of passing a protective tariff law will not revive enterprise; capital is required which this country does not possess to the extent necessary; our money volume is short, and an enlargement should go hand in hand with a protective policy. The volume cannot be materially increased unless there is more basic or redemption money, and there cannot be any appreciable increase without the freest coinage of gold and silver. England is interested to support her own manufactories, and her people will not be generous in supplying the means of building up competition here.

## CORRESPONDENCE

## CALIFORNIA.

JULIAN, CAL., July 1, '96.

EDITOR JOURNAL:—Prospects and prospectors are bright and cheerful. The ten stamps of the Owens mill and the ten stamps of the Ready Relief are dropping night and day, pounding the gold out of the rocks.

H. H. Whitney has arrived from San Diego, and will start the Gold King mill at Banner. This will make a total of thirty stamps dropping in the district.

Cave J. Coutts, Jr., owner of the Ranchita mine, has closed a contract with a San Francisco firm to erect a Kinkead mill at the mine. It will be run by steam, for which there is plenty of wood and water. The selling firm

guarantees that the mill will crush from ten to twelve tons every twenty-four hours, and will save a larger percentage than the stamps. Under their contract with Mr. Coutts, the mill will have to give him satisfaction before it is paid for. The price, set up at the mine, is \$2,200. The Ranchita is said to have 200 tons on the dump, and 6000 tons in sight. The high grade of the ore continues.

Mr. Drew Bailey, who first discovered gold at Julian in 1870, recently experted the mine. The new mill will be running before Aug. 1st.

Messrs. Moran and Murphy have sent a six-ton crushing from the Gypsy mine to the custom mill, which yielded \$20 per ton.

The Ganahl Brothers, of Los Angeles, have set a force of miners at work on the Gold King mine, J. M. Farley is superintendent. The mine has been idle for several years.

W. W. Boswell, T. B. Shide, Robert Walker, and J. Hugh have leased the Chapparral mine, and are at work taking out ore. The Chapparral is on the main lead of the Julian mines.

The rich strike on the Kentuck has been a regular sensation. About a month ago, Mr. L. N. Bailey, manager of the Bailey Triple Ledge company, put a force of miners at work on Ledge No. 1, beginning at some old workings. These were cleared out, and an 18-inch vein was found. The ore gives \$1000 per ton, and there is enough in sight to make the company feel good. The Kentuck has been on the market but found no buyers; now the company does not care whether stock sells or not.

The Owens mine has been compelled to temporarily shut down on account of bad air. The company will put in 600 feet of six-inch pipe, and resume work at once. Recent assays of samples gave \$334.19 per ton in gold and \$4.01 in silver. The percentage of sulphurets was 1 per cent, and assayed at \$1.04 per ton.

The Antelope people are timbering their shaft.

Returns of assays from Valentine ore give 1.75 per cent of sulphurets, valued at \$125.67 per ton in gold. The free gold in the same rock went \$54.77 per ton.

Over twenty gold mines in Julian are now being profitably worked. The miners are taking out the gold and paying their debts, and merchants are prosperous.

A new store has been opened in Banner.

Laborers are numerous, and many are unemployed. Miners' wages are \$2.50 per day when they can get work. Common laborers will be wise not to come until sent for.

Samuel Brannan, jr., son of the famous pioneer, is going into partnership with L. E. Aubury, the San Diego assayer. B. A. S.

ISABELLA, CAL., July 2, '96.

EDITOR JOURNAL:—I have been receiving a number of copies of your journal, and noticing your article on the question of developing the new mines on the desert to the east, I have concluded that likely you would like to hear from this section.

You are probably aware that for about two years the parties connected with the Kern River and Los Angeles Electric Power Company have been consolidating a franchise for 35,000 horse power on the waters of Kern River. If this power can be successfully transferred to Los Angeles, then certainly remaining power could be transferred to these new discoveries on the desert.

While taking the census of mines in 1890, I expressed, in the *Mining and Scientific Press*, the opinion that the coming El Dorado

of California lay east of the mountains between here and the San Bernardino range. Discoveries since then all tend to confirm the prediction. A recent discovery on Eskimo creek, about ten miles south of here, and near the summit overlooking the desert is liable to prove one of the most important ever made in California. This lead, as far as prospected, it is said, averages fifty dollars to the ton, is thirty-four feet wide, and is readily traceable two thousand feet. This is within the verge of the old mining region; but the outposts of discovery have now been carried far into the desert. There are chances to locate unclaimed water privileges on the tributaries of Kern River, representing 5000 to 10,000 horse power in a single location, within forty miles of some of the more important of these recent discoveries. With the ability to transfer power by wire, who can doubt the future of that region. It is claimed that boring has already shown that water can be had, but did any one ever hear of obtaining water from compressed air; but more anon.

Recently, many Los Angeles mining men have been working over the old placers along Kern river as well as old quartz mines around Keyesville, which have lain idle for from twenty to forty years.

Respectfully, STEPHEN BARTON.

29 PALMS, CAL., June 26, '96.

EDITOR JOURNAL:—I send you some notes from the desert mining region:

The Virginia Dale people are busily engaged taking down the five-stamp mill, near the Dry Lake, and moving it to a point near their mines,  $4\frac{1}{2}$  miles distant.

The Rattler, Virginia Dale, and others composing the Virginia Dale group, are fine properties, and, if properly handled, will pay handsomely even with a five-stamp mill.

Ellerman, Furgison and others are driving their work along in fine shape on their group of mines, a few miles east of the Virginia Dale group.

Development work on the Haleworth group is showing up some fine bodies of ore. Their main tunnel on the Carlyle is now in about 800 feet.

Mr. Fred Huber, who is operating about six miles east of the Virginia Dale mines, has some very promising prospects which he is now engaged in developing. The ledges are large and strong and good results can naturally be expected. The formation or country rock is principally porphyry and granite.

Messrs. Striplin and others are pushing work on their property a few miles east of the Virginia Dale with very good results.

Some very rich discoveries have been made recently in the 29 Palms section.

J. W. Park is pushing his work as rapidly as possible on the Summer Queen and other properties on which assessments are due for '96, and is taking out some very good free gold ore.

The new finds and the large bodies of fine ore that development work is showing up, certainly points to a bright future for the desert mining region.

What we most need is a railroad and capital. The first seems almost an assured fact in the near future, which will bring the latter.

J. W. P.

EDITOR JOURNAL:—The Chucawalla mining district (formerly Pacific mining district) is located thirty miles northeast of the Salton station, on the S. P. R. R., and is in Riverside county; is about twenty-five miles east of



Cottonwood Springs. It is an old mining district, one of the mines having been discovered and prospected prior to the survey of the S. P. through there in 1874-76.

Though the district has been only partially prospected, over one hundred locations have been made since January 1, '96, and there are very few claims on which the veins average less than three feet in width, and some of the larger ones are from six to twenty feet solid quartz, not stringers or ribbons, but as compact and solid as iron, and assay from \$3 up per ton. The ore mostly is a white hard quartz, iron-stained, carrying sulphurets and considerably oxidized, with some galeua and lead carbonates, showing gold, silver, a small percentage of lead and traces of copper.

The formation, as shown on the surface, is a micaceous granite, syenite, porphyry, slate and quartzite. The general trend of the formation is northwest and southeast. There is a large contact vein in syenite and slate, the average width of which, taking it for over two miles, is ten and one-half (10½) feet, and which assays on the surface, (croppings) from over fifty assays, from 41 cents to \$417.

Water is now being developed in quantity in only one place, about 1½ inches being shown up, while there are four other places within two miles, where a similar or larger quantity can be developed at a small expense, considering the value when developed.

Wood in abundance: ironwood, (desert coal, from its hardness and heating qualities) palo verde (desert willow) covers thousands of acres of the desert, within easy hauling distance of the mill which the Sterling Gold Mining Co. is now erecting in the heart of the district, which is a Fraser & Chalmers ten stamp, and will be dropping on \$75 rock within three months. Without doubt, from all present indications, it is destined to become, in the immediate future, one of the richest and most lively districts in Southern California. CHUCAWALLA.

#### THE PROFESSIONAL EXPERT LOCATER AND MONOPOLY LOCATER.

Sit Down on Them—Make Them go to Work—An Amendment to the Mining Code Much Needed.

POMONA, June 29, '96.

EDITOR JOURNAL:—Nothing is more detrimental to the progress of mining to the state of California excepting the depreciation of silver that is the effect of the professional locater and relocater of mining claims, and especially is it the case in the undeveloped districts, and the extent to which this posting of notices is done is something astounding. Personally, I know of twelve consecutive locations of the same property by the selfsame person, and during the entire time of twelve years, \$1200 worth of work had not been done on the whole. Is it not a case of the animal at the hay mow? He can't will not, nor will he permit others to develop the country. There are numerous instances where the repeated relocators by the same parties extends over a period of from three to seven years and no work done.

In the matter of the monopoly locater of mineral territory, it is a well-known fact in many of the districts that one or two persons claim, by right of having stuck up a mining notice, 15 to 75 claims.

On a recent visit to a mining camp in San Bernardino county, I examined the development work, which, with the exception of three workings, are but holes in the ground, varying from three to ten feet, and, in company with a mining friend, we traveled over

an extent of country equal to nine miles square, endeavoring to find unclaimed ground, but in vain. We gave it up. Just here, permit me to say that five men that we saw and talked with comprised the mining population of the district, and one of the five claimed to own nineteen claims.

In a certain puffed-up district in San Diego County, it is affirmed by many persons who have visited the camp or district that there are two persons who, by locating claims, from 75 to 140 times, 1500 feet by 600 wide, of government mineral land, equal to 210,000 linear feet, or about 1400 acres of mineral land.

The chief consideration of these facts is the effect it has and the remedy necessary to relief.

The effect it has is too distinctly clear to require any other than a minute's consideration, when it is evident to every person giving the matter thought that these notices stuck up all over the country are but forbidding instruments to capitalists, to the mill and smelter men and the industrious miner, who would, were the conditions otherwise, develop the country. The notice otherwise speaks the sentiments of the professional, as he dates his notice 12:15 A. M., January 1st, 18—, in expressed words: We were here first, development or no development, pungle down your cash, or leave the camp, and nine-tenths, who are seeking legitimate mining, leave.

It would be advisable to adopt the Arizona mineral law touching this matter, viz.: The location of a mineral claim has sixty days from time of posting notice in which to sink a 10-foot shaft, as required by law, which must be performed in the time, and prior to placing the notice on the county record, and that no person or persons shall perpetuate his or their ownership to a mining claim by the simple act of relocating the same.

The public-spirited miners of the state will, on the convening of our next legislature, petition that body, praying that such amendment be made to the mining code as will appropriately remedy the injustice here alluded to. Respectfully, T. W. BROOKS.

CENTER MINING DISTRICT, NEVADA,

July 8, '96.

EDITOR JOURNAL:—Center district is situated in the southwestern part of Esmeralda County, Nev., about 48 miles from Alford, Inyo County, Cal., which is the nearest R. R. station. It is surrounded by four other camps or districts as follows: Palmetto, north; Lida, east; Tuly Canon, south, and "Sylvania, west of it.

There is but one mineral lode in the district, which has an average width of 500 feet, and can easily be traced for eight miles in length, it has an extensive lime belt for a foot wall, while a large deposit of porphyritic slate forms the hanging wall.

The Fortunatis mine is the oldest location on that lode and, during the former ownership was extensively worked, from 1885 to 1890, close on 5000 or 6000 tons of ore were extracted and worked in two steam arastras. I was told several times the ore would average close on \$30 per ton in gold, but if the ore were taken out clean, it would go to \$45 per ton.

The developments show 3 distinct ore veins, but the main work was done on the center vein; the ore is mostly in deposits, and I have seen one deposit measure 13 feet across the breast. The present owner is L. Tietjen, but Messrs. Dr. Rhea and A. Palm have a bond on it.

There are several locations on the west end—some very good ore has been found there, but as yet not much development done on them. On the east end Mr. W. J. Brown is developing a claim of his own, there also is a very fine showing; and still farther east are several more claims where developments are pushed ahead, some ore of one of those claims was worked in a horse-power arastra, which is a rather slow process.

The wood supply is very plentiful, it is chiefly pinon timber, and is excellent for all milling and mining purposes. Large springs are in all of the high hills, so that the water supply can be had in almost any quantity, and the climate is simply perfection, for a high altitude, it is never too warm in the summer, and in the winters have never seen the thermometer down to zero, nor have I seen the time that supplies could not be brought in here. A. O. R. L.

#### Miscellaneous Mining News.

##### ARIZONA.

The work of moving ore from the hills to the Watson-Donaldson mill on the Verde commenced the fore part of the month.

The enlarging of United Verde smelter is nearing completion. The new machinery already started has worked without a hitch.

Work on the new assay office for the United Verde Copper company is being pushed. The building will be of white brick, and will be one of the most complete assay offices on the coast.

J. P. Kelly has deeded A. A. Johns one-eighth of the Monarch and Mother mining claims for \$500. The property is in Hassayampa district, near Prescott.

Hon. Nick Galles is putting up a mill on Bohner's claims, near J. R. Beatson's place, on the Santa Maria, near Prescott.

Some fine properties are owned by Dillon, Reese, Ashton, Beatson, Blakely and others, and the outlook for a big mining camp on Upper Santa Maria, near Prescott, is propitious.

Joe Howell has sold his big mines on Lower Santa Maria, near Prescott, for a big sum to Hon. N. Galles, and a mill will soon be put up there.

The Crowned King Mining Co., of Prescott, Arizona, is having two mammoth smoke stacks installed. They are 30 inches in diameter and 20 feet long each.

John Ross is having 30 tons of ore from the McNary mine, Copper basin, worked at Harlan's mill. The ore has to be hauled through Prescott and seven miles south, as does a great deal of ore from the gold district immediately west of town.

J. M. Burrows was on July 6th, exhibiting, in Phoenix, Ariz., some large chunks of copper and gold ore from his mine in Cave Creek district, near Phoenix. The samples shown run high in copper and about \$50 a ton in gold.



Messrs. Langpaap and Dunker are hard at work getting ready to cyanide on Silver Thread mine and Head Center dumps.

There is considerable activity in mining in Thumb Butte district, near Prescott, and the properties which are being worked are showing up well. Forrest and Dougherty have two tunnels on their Eastern Star claim, one of which is 110 feet and the other 120 feet, both in good ore.

A strike of rich silver ore was made recently in the Little Giant mine, owned by J. C. Coplin, Dan Lemons, and Ed. Blake, and located three-quarters of a mile east of the old Cox & Coplin mine, near Globe. The ore assays 'way up in the hundreds. A small shipment was made last week to the Selby Smelting and Refining Works, at San Francisco.

#### Prescott.

Mining in the Bradshaw mountains, near Prescott, is having a local boom. Bob Dougherty is working a mine in the vicinity of the Crown King and he has some very nice rich ore.

Col. Herring, of Phoenix, has several men working on Brittenham's extension of Luke's. Art & Clarke have men working on the Dos Hermanos in that vicinity.

Colonel Hanger, Captain Purcell, Major McKinzie and Rev. Forbes are the operators of the different mines in Pine Flat.

E. M. Shackelford has twenty men working on the Rapid Transit mine and in the Tiger mill where he is working the ore. He also works the ore from Luke's.

The Lincoln boys from Phoenix are doing well on their mines east of the Crown King.

The Gladiator is steadily producing good ore.

The Admiral Co. will resume work on the Anaconda soon. The company has good mines and will stick to them.

At the Pearce mine, the steady stream of wagons hauling ore to Cochise station gives an air of activity that is refreshing. About twenty six to eight horse teams, of two wagons each, haul 120,000 pounds of ore daily, which is sent to El Paso for treatment. About forty-five men are at work in the mine and continual improvements and erections of necessary ore chutes and mine buildings are being made.

From Tomlinson Hill encouraging reports continue to come, and the prospects of opening another bonanza is indeed promising, as is also reports from other localities close by.

About four months ago, Herman Boehm and partner went to the Santa Maria country on a prospecting trip, and were lucky in finding two veins, both very good. Upon one vein, about twelve miles below Dan Thorne's mines, they located two adjoining claims, the Southern Belle and the Southern Girl. Upon an other vein, which is "blanket," and about one and a half miles from the above claims, they located the Buckskin. This claim shows four feet of free milling ore. On the Southern Belle the vein is some twenty feet between walls, and the ore crops the full length of the claim, and for about 300 feet on the Southern Girl, the extension. A four-foot shaft sunk upon the Southern Belle, next to the foot wall, exposes ore throughout its entire width and to the bottom, 23 feet. Everything that came out of this shaft was

good free milling ore, while an 18-inch streak next to the foot wall horns from \$40 to \$100 per ton in gold. The claims are well located, being about one and a half miles from Santa Maria creek, and the Southern Belle lies upon the side of a steep hill, making it possible to attain a depth of 400 feet by driving a tunnel upon the vein. These properties have been banded to parties who propose, at an early day, to erect a mill upon the Santa Maria to work the ore.—*Prescott Courier*.

As a result of the visit of G. M. Hyams, from Boston, representing the Old Dominion Copper Mining Company, the disagreement between the company and its employes was quickly and satisfactorily adjusted, and work resumed on Monday, July 6th. The company was willing to adopt the Buffalo scale, which is \$3 for men in the mine and smelter and \$2.50 for general labor about the surface. Everything asked by the men was conceded, except that the company reserved the right to employ whom it pleased, free from dictation, and without a formal recognition of the Miners' Union. On Friday evening, July 3d, a meeting of the Old Dominion employes and other miners in the camp was held at the school house, and the proposition was without argument put to a vote and was unanimously and enthusiastically accepted.

The new lead smelter to be erected at Crittenden by C. C. Fitzgerald will consist at the outset of a single 40-ton stack, but additional stacks will be put up in the near future. It is anticipated that the stack will be ready to blow in by September 1.

#### Arizona Sampling Works.

The following is the weekly report of the Arizona sampling works at Kingman:

Pomber & O'Brien, two tons.  
A. N. Eaton, two tons Daisy mine.  
Barney McCall, three tons Mineral Park.  
Risley & Tarnow, two lots White Hills.  
G. A. Valenzuela, two lots White Hills.  
T. Lopes, two lots from Cross Fraction, White Hills.  
F. Martinez, two lots White Hills.  
Cedar Valley Gold and Silver Mining Co., one car load.  
Francisco Lopes, one lot White Hills.  
Wm. Grant, two lots.  
Shipped two carloads to smelter.

Sixteen separate leases have been let on the Nighthawk mine near Kingman, with from two to four men represented in each lease. With this large number of men at work the mine will become one of the heaviest producers in the country.

#### The Cyanide Process.

The treatment of gold and silver ores by the cyanide process is becoming general in almost all sections where these metals are produced, and where the ore is low-grade it can be treated with profit, whereas under the milling process it could not be worked at all, only at great loss.

In Tombstone there are three cyanide plants in successful operation and a fourth plant is being got in working order as fast as the conditions will allow, and in a short time this plant will also be pouring the wealth of the waste dumps into the coffers of the fortunate owners.

Other localities in Arizona have the cyanide process in successful operation, and ac-

cording to the Yuma *Sentinel*, El Rio, five miles below the town of Yuma, is soon to have a twenty-ton plant. It says:

"In a few days Mr. Luce will have completed a twenty-ton cyanide plant on the bank of the Colorado river at El Rio, about five miles below Yuma.

"Mr. Luce and another gentleman purchased some time ago of O. F. Townsend the tailings of the old El Rio quartz mill at that place, and they estimate there are about 8,000 tons of tailings, and assays made show that they contain \$5 in gold per ton. They figure that \$1.50 per ton will cover the expense of treating them."—*Prospector*.

#### CALIFORNIA.

##### INYO COUNTY.

##### Silver Peak.

John Chiatovich recently struck a five-foot ledge of pay ore in the Red Light mine. In the Mary tunnel, also his property, water has been found in such quantity that it will not have to be hauled as heretofore. He has about 1100 cords of wood piled up for use in the mill.

The Hanchett Company is working twenty-four men in the Soldier Boy mine, and has sent to Austin for about twenty more. With an increased number of miners, the mill can be kept running two-thirds of the time. The stamps are dropping at present.

Louis Chiatovich expected to start his mill in the Gold Mountain neighborhood last week.

Tony Sais is packing ore to the amount of about 25 tons daily.

##### Big Pine.

Dick Whitaker and his partner, Autone Cunha, came in from Tule canon. They report their claim in good shape, and will soon undertake the erection of reduction works. These prospectors have pursued a conservative course in the management of their mine and have developed sufficient ore to warrant a milling plant. Had this course been the rule of action generally, much needless waste of capital would have been prevented in this county.

The owners of the Alvord claim have great confidence in its merit and hope soon to see it further developed.

Geo. L. Albright left recently for Sodaville to begin the building of a five-stamp mill for Robt. Stewart. The mill will be put on the old furnace there.

##### RIVERSIDE COUNTY.

The Good Hope mine, after having passed through many vicissitudes, has finally landed in the hands of Henry B. Johnson, who acted as the attorney for J. M. Sigafus, the former owner of the mine. Mr. Sigafus is now at the property and personally superintending it. He has twelve men working. Most of the work is being done in the main shaft and running a cross-cut in the lower south level. He has also let a contract on the first level north, and is sinking a shaft south of the old workings over the hill, with the probable idea of opening up a new ore body.

The Good Hope Mining company recently obtained a judgment against J. M. Sigafus. The trial was one of the longest and most interesting that has occurred in connection with



mining probably since the famous Mollie Gibson and Aspen mine suit. Many witnesses were taken across the continent by both sides, and the expenses of the trial were enormous.

B. B. Jones, of Havahill, Mass., is doing some work south of the Good Hope mine on a lode supposed to be the Good Hope.

The Santa Rosa mine is running steadily day and night. The shaft, 700 feet south of the main shaft, is being sunk, and stoping has been commenced in the drift on the 100 foot level.

J. B. Dennis is running his 5-stamp mill on custom ore from the mines in the vicinity of his mill.

The Leon mine still continues to work steadily. The owners are determined to have a big surplus of ore on hand before they build their mill.

Herman & Vaughn received last week a five-stamp mill for their gold mines in the San Jacinto mountains.

A clean-up from the Lista mine was on exhibition in San Bernardino July 2nd, and was in the form of a good-sized lump of gold, valued at \$163. The mine is one of the most promising in the Virginia Dale district. The gold was obtained from a ton and a half of ore handled through a small mill and the ore was not selected. The mine has not been worked to any great extent, and the ore from which the gold was obtained is almost surface rock.

#### Mine and Water Located.

A mining location notice was filed July 6th by Sol Vines et al, the name given being the Occident. The same parties also filed a water location notice in connection with the mine property in the Cottonwood mountains, about six miles from Cottonwood Springs.

A mill run of several tons of ore from the Jumbo was made the first part of the month at the Santa Rosa. It is said to have been very satisfactory to the owners.

The Gavilan mine is now working fifteen men, and it is reported that as soon as the manager, Mr. Vercoc, returns from England the working force will be increased to fifty men.

#### SAN BERNARDINO COUNTY.

##### On the Desert.

Although it is the hot summer season, we have been having some heavy thunder storms at Randsburg and Cow Wells. July 4th was remarkable for an incessant roar of thunder and forked lightning.

There are now eight places in Cow Wells (Garlock P. O.) where they sell liquid stimulants, and to say some of the boys were drunk would be putting it mildly. There was a dance which lasted until breakfast time the 5th.

Koehn's mill at Kane Springs has made four runs of ore. Twelve tons for Benson Bros., of San Bernardino, which went \$5.50 per ton; six tons for Green & Mugler, of Bakersfield, which went \$17 per ton; two tons for F. H. Heald, of Elsinore, which went \$72 per ton, and eight tons for C. A. Koehn which went \$20 per ton. All except Mr. Heald's ore was from Randsburg.

Messrs. Taite & Rommie, of Randsburg, sent three eight-horse loads to Mojave last week, which is to be shipped to a smelter.

Last week I made a tour through the Randsburg mines and found it a very peculiar formation to carry gold. Most of the rich rock would make an excellent quality of lime if burned. A large majority of the people there are alfalfa miners, using scoop shovels, pitchforks and hay augers. They are farmers from the country adjacent, Bakersfield, San Berdo, etc. After awhile they will sell out to real miners.

The mill at Mesquite Springs has done nothing as yet. It is reported that F. A. Bland took ore from the Heald mine to Los Angeles, and representing it as from his own mine, sold a half interest to John Clark of 408 N. Pearl for \$1000. This piece of sharp engineering is what is causing all the trouble, and if proven will probably add to the gang who mine rock for the State at Folsom.

OLD COR.

Messrs. Moyle of London and Nicol of Detroit, who recently spent several weeks in the mining country along the Colorado river north of Needles, recently took a ninety-day bond on the Mountain Queen, the now famous gold mine situated about fifty miles north of the desert metropolis Needles, on the west side of the river, owned by Pat Flynn. The figure named in the bond is \$60,000, and every mining man who has seen this property declares it a bargain at such a price. For two other properties in the same neighborhood owned by Flynn Bros. and Stewart, \$90,000 was asked, but they were not included in the proposed purchase.

#### THE MINT MINES.

At the Mint group of mines near Ibox, lately purchased by Mr. Harbeck of Chicago, large boarding and bunk houses for the accommodation of the force are now being erected under the supervision of W. E. Van Slyke and Mr. Wilson of San Bernardino. A large hoist which will be serviceable to a depth of 1000 feet is also being put in. For the present it will be operated by a ten-horsepower gasoline engine. This is considered the most economical power for such a plant in the desert section. As soon as development of the mine is under way work will be inaugurated on the stamp mill.

The Mint group is located just across the gulch from the rich property of the Ibox company, of which Chas. Mariner of Los Angeles is the chief owner. Mr. Harbeck is very well pleased with the showing so far made by his new purchase, and the active way in which he is pushing work is proof conclusive that he didn't take hold of the enterprise for fun. He means to make a producer of it.

#### GOLDER CAMP.

L. R. Barrow, who is recently from the Golder mines, says that the reports that almost every miner has left the camp are untrue. Instead of there being only fourteen men at work, there are between sixty and seventy men who are working.

The Bald Eagle No. 1 has sixteen owners, and in this claim are several men who are working the property under lease.

There are only twelve claims being worked, but in all cases several men are employed at fair wages and the camp is still regarded as a reasonably prosperous one. While there are no big strikes reported, as at the opening of the camp, there is an occasional find of a valuable nugget. Only a few days ago Phenie Jackson, who purchased the Bald Eagle No. 2, found a nugget valued at \$100. There

have been several smaller lumps discovered, the largest of which was worth \$20.—*Saturday Review.*

#### SANTA BARBARA COUNTY.

##### A LOMPOC MINE.

First Run Gives the Riverside Owners Encouragement.

Dr. Ruby, who with W. R. A. Godfrey, Tyler Godfrey, J. C. McLeod and J. B. Holmes, owns a claim at Lompoc, in Santa Barbara county, received a six-ounce bar of gold the last part of June from the mine, the result of the first forty hours run on the mine. In addition to the gold mentioned the clean up panned out three ounces of platinum, which of itself will pay for the labor expended in making the run.

The mine in question is located on the ocean beach and the gold is taken from the beach sands, which are washed through sluice boxes in which are placed quicksilver plates. Dr. Ruby is much pleased with the first clean up, and is confident that he and his friends have a good thing, and their friends here will hope that they have.—*Enterprise.*

##### The Green Lead Mine.

Not since the early '60s has a specimen of the ore from the famous Green Lead mine been on exhibition. Jack Simmons returned to San Bernardino from there July 1st and brought with him a huge chunk of rich ore which he has on exhibition at the mining bureau, which is managed by himself and Jos. Brown. There is hardly an old-time miner in California who is not familiar with the mine. It was one of the richest ever discovered in Southern California and for many years made its owners big profits.

It was owned by a Mexican named Montejo, who discovered a small vein of rich ore, which he followed down to a kidney deposit. The ore was taken out and worked in an arrastra. Even with this crude method it is claimed the owners took out over \$100,000 in one year. The finding of this kidney was followed by the discovery of a second one and a tunnel was run in from the side of the hill. Later this pinched out, and the mine with its cottages was abandoned. From that time to the present it has lain idle. Jack Simmons and Joseph Brown secured a lease from the owners, and for several weeks have been working seven men.

The tunnel was found to be blocked up with debris. This has been cleared out for a distance of 450 feet, bringing the men directly beneath the old shaft, which reached to the top of the hill. Ore was found, and the indications are that with the sinking of a shaft another large body will be uncovered. The mine is only forty miles distant from San Bernardino, and there is an abundance of everything necessary to work it. It is well known to those who travel the road leading to Bear lake and Holcomb valley.

#### NEW MEXICO.

##### Hillsboro Mines and Mills.

Scott & Owens have this week increased their working force on the Sherman and will soon have out another mill run of ore. The returns from the last lot and the amount of ore in sight encourage them to expect a very successful result from their lease.

At the Snake mine advantage was taken of the lay-off for the Fourth to reset the hoisting machinery and for re-lining the upper portion of the shaft.



J. McKee is sinking on a good chute of ore on the Happy Jack mine, a portion of which he has under lease.

Wayland & Co. will make a big shipment of high grade ore to El Paso next week, from the El Dorado.

T. Scanlon is opening up some fine ore bodies in his new claims in Gold Standard gulch.

The placer people have asked for and obtained an extension of time until December next of most of the property which they have under bond. Some money, however, has been paid, and that considerable immediate development is contemplated is evident in that Captain Brannigan is to take charge of the work and start a camp on the Animas at the proposed dam site.

The following interesting items of news from the Grant county mines were gathered by the *Silver City Independent*:

#### SILVER CITY.

P. J. Dodd has taken a lease on the Bremen mine at Chloride Flat, and started work.

#### PIÑOS ALTOS.

The Stanley and Martin mill is running along without any interruption and is giving good results.

The Western mine, belonging to A. Hirschberger, is now in good shape to handle ore in quantity, as a new hoister has just been completed.

The Deep Down mill is kept at work on ores from the Treasure company's properties, and everything appears to be running satisfactorily to the management.

The Golden Giant is moving along splendidly and is supplying the company's mammoth mill with all the ore it can conveniently work. Water still holds out in sufficient quantity for all purposes, but the most rigid economy is found necessary.

Spaulding and Allen are down 150 feet on their Silver Chord mine and they have an abundance of ore in sight. Assays recently made in this city give a result of 94 2-10 ounces of silver per ton, as well as a few dollars in gold. Even at the present price of silver the property is a paying one.

The Mountain Key is working a force of sixteen men on the 300-foot level and ore is being hoisted regularly. Work is necessarily slow, as many of the old workings had caved and required cleaning out and retimbering. The main shaft, 700 feet deep, has 400 feet of water, and Mr. Chandler, who is the Superintendent, was in the city July 1st for the purpose of securing a larger pump to lift the water to the surface. The mill will be started as soon as water can be obtained from the mine.

The furnace of the Silver City Reduction Company was blown in for a steady and continuous run the last of June, after a long delay caused by the non-arrival of the water jacket. This smelting plant in steady operation will allow the working of a number of mines in that locality which could not heretofore bear the expense of shipping ores to distant points for treatment.

Con Whitehill is developing a prospect on Whiskey Creek, near Silver City, which gives

promise of being a good paying property in the near future. There is a 3-foot vein of ore in sight which runs 27 ounces silver and \$9 in gold.

#### CENTRAL.

The Lost mine, owned by Wellgehausen & Bellm, is showing up satisfactorily. Al Charlton and Alexander Woodburn, who have a lease on this mine, have struck considerable gold ore recently which runs as high as \$250 in gold, but it is not determined at the present writing how extensive the find is. A mining expert is on the ground in the interest of California capitalists, who seem pleased at the present prospects, and it is not at all unlikely that the property will change hands in a short time.

A shipment of two tons of ore was made to the Deming Sampling Works July 6 by Julius Wellgehausen for Hospital Steward Wissell, from the Last Chance mine, adjoining the Texas, which will run \$30 in gold and 150 ounces silver.

The North Homestake mine, near White Oaks, is being worked with a small force and good ore is being taken out. This ore comes from the south end of the claim, where no work has been done for the last eight years, except the driving of a tunnel at the 400-foot level in the working shaft. This tunnel was completed last fall when the mine shut down.

At the Little Pittsburg mine, North Canon near Albuquerque, they struck a good flow of water the last of June at a distance of 80 feet, and report that the quality of ore is improving as the work progresses.

#### Victor Mine Bonded.

The owners of the Victor mine, at the head of Colla canon, near Cochiti, leased and bonded their mine the latter part of June to Colorado parties for fifteen months for \$50,000. The owners are to receive in addition to the bond 10 per cent of all ore valued at \$50 and 15 per cent of all ore over \$50 per ton taken from the property in the fifteen months. The lessees agree to put in thirty days' work each month for fifteen months. This is by far the best bargain made is the Cochiti district, and was consummated through F. H. Shuckhart, one of the owners. This move will open up for development one of the best properties in the west and make Cochiti boom.

The Rip Van Winkle mining company are preparing to resume work on their mine in a few days. The vein they opened last year at a depth of fifty feet proved to be valuable, the ore taken out being high grade.

J. C. Plemmons is about to patent his Hermosa silver mine.

#### Rich Strike at Bland.

The pleasing news comes from Bland that a large and exceedingly rich body of free gold ore has been encountered in the bottom of the principal shaft on the Albemarle mine in Colla canon. The ore is described as having very much the appearance of grey sand, and runs about \$500 per ton in gold.

The Albemarle is owned by Thomas H. Lowthian, Norman Bletcher and others, and has long been known to carry more or less free gold.

The Beckman mill has been started up by L. B. Dewey, and is running smoothly on second-grade Albemarle ore. Mr. Dewey is a thoroughly practical Colorado miner and mill man, who justly enjoys the confidence of the Cochiti people, and there is general rejoicing that the mill has passed into his hands.

The Washington, Lone Star, and other mines are steadily outputting excellent ore, and the weekly shipments to Pueblo are constantly increasing.

T. F. Abbott and W. D. Howard of Bland and George Marsh of Santa Fe hold a \$2,000 bond and lease on the Little Mollie mine, running until June 1, 1897. They are working the promising property for all it is worth and hope soon to join the number of regular Cochiti shippers. The Little Mollie is located 1,500 feet from the Washington monument, has been developed with a tunnel and shafts to the extent of about 200 feet and shows a strong mineral bearing ledge that inspires much confidence in the minds of those interested in the bond and lease.—*New Mexican*.

Output of Hillsboro gold mines for the week ending Thursday, July 9th, 1896, as reported for the *Advocate*:

	Tons
Wicks Mine.....	10
Richmond.....	90
Happy Jack.....	35
Snake Group.....	85
Catherine.....	10
Key West.....	25
Prosper.....	70
Eighty-Five.....	65
Total.....	410

Total output since Jan. 1, 1896,—12,809.

Messrs. C. Leon Allison and John Hart returned to Santa Fe last evening from a visit to the Cochiti mines near Bland. They report the camp quiet, but that the miners thereof are confident and contented. The Lone Star, Washington and Albemarle are steadily shipping their first grade ore to Pueblo and are getting satisfactory returns. Several other mines in the district will soon begin shipping. Mr. Allison was much impressed with the number and extent of the mineral bearing ledges he saw, and will doubtless pay another visit to Bland before long.

#### COONEY.

Cooney, Coates and Shaible, lessees of the Cooney mine and mill, have temporarily suspended operations.

George R. Brown, superintendent of the Galveston Company's property, is working twenty men, some on development and several getting in readiness for the erection of a mill.

Senator Hugh A. Price has a small force at work on the Mountain Key mine, which he holds under lease and bond. The development work thus far has shown most encouraging results.

#### MEXICO.

Important veins of gold have been discovered in La Bonancita mines, Sonora.

Senores Echavarria have filed claim to two veins of gold in the Cerro Agudo district of Mocorito, Sinaloa, and propose putting in powerful machinery for working it.



The Empresa Metalurgica, of Culiacan, Sinaloa, under direction of Wm. H. Clark, will soon begin work. With this object they have received lots of ore.

From Santa Eulalia mining district it is learned that the Santa Domingo mine will soon be in operation and producing lead ore of considerable richness. It is said over 60 men will soon be put at work.

About 15 miles from Alamos, Sonora, a very rich mine has been discovered, with copper ore, some of which yields 30 per cent copper, and which also shows an admixture of gold. A company has been formed to work it.

The celebrated Compania Exploradora, Sierra Mojada, which was stocked for 100 shares, is paying a large monthly dividend, the shares will become a favorite among investors.

There has been formed in London a mining company, called Nueva Compania Minera del Rosario, with a capital of £50,000 divided into 200,000 shares of five shillings each, the object of which is to acquire the mines of El Rosario and Valencia, situated in the department of Nieves, Zacatecas.

Work on the Nueva Parrena, Sierra de la Ventana, has commenced under the supervision of Captain Wentworth. The shareholders of this company are the most prosperous and best element of the business men in the city. This mine will be fully developed and it is expected it will become a leading mine in this district.

From the region of Minas Prietas arrive every day notices of discoveries of new veins, or that metals of good average have been found in those which are being worked. This mineral region continues to grow in population, and promises to become one of the greatest and most flourishing in the republic. On account of the construction of a railroad, many laborers have hastened to establish themselves at Torres or La Colorado.

Encouraging reports come from the mining camp of Jesus Maria. Some important changes in mining circles have recently been made. At present nearly all of the mines in that district are working low-grade ore, but in such large quantities as to make immense weekly shipments of bullion. Foreign capitalists are lending an attentive ear to the wonderful tales of these rich mines, and a great deal of capital will be invested in that vicinity during the coming year.—*Modern Mexico.*

A correspondent of *El Constitucional*, Zacatecas, writes from Juchipila, in the state of Zacatecas, that some months ago there were discovered, about a league from that city, excavations of an old mine; some of the ore was assayed and gave good results. Following one of the old canons for a distance of 45 yards, crude silver was found, partly in the form of laminae and partly in threads, covering the surface of the rocks. The vein is wide and easy to work, as the ore is a kind of wash-ball and molds on exposure to the air. The correspondent has information that a claim has been filed to the mine under the name of Potosina, and thinks that there are other valuable mines in the same vicinity which remain unworked owing to the lack of capital to develop them.

Good news is received from the mining camp of Real de Quebrada Honda, Sinaloa. Don Fortunato de la Vega, who owns rich gold properties in that region, is about to put up works for the extraction of the metal.

#### Minas Prietas.

The Minas Prietas group of mines is forty miles from Hermosillo and fifteen miles from the railroad, from which point a line is now building.

The leading mine is the Colorado Creston, which has a three compartment shaft, 1000 feet deep, with double deck cages used. The ore is 25 feet wide on an average all the way, and runs \$50 to the ton. Much of it goes even higher than \$50, and gold is frequently yielded with an equal number of ounces of silver besides.

The Amarillo, Colorado Creston and Minas Prietas are the leading claims in the camp, that has already a population of 5000 people. Were it in the United States, money would scarcely estimate the value.

The Mexican Ore company, of Hermosillo, Mexico, has placed in the assay office new and costly machinery, which is capable of smelting 40 tons of ore a day.

La Mina Colorado, in the district of Ures, about thirty miles from the city of the same name, has been sold to a company organized at Guaymas. The price paid was \$30,000.

Ex-Governor A. R. Shepherd, formerly of Washington, D. C., is in Chihuahua, Mexico, arranging the details for the building of a railroad from that city to the port of Topolobampo on the Pacific Coast, the proposed line passing through the rich Batopilas mining district, where Mr. Shepherd's mines are located. The concession for this road was recently granted Mr. Shepherd by the federal government. New York capitalists are largely interested in the project. A preliminary survey of the line is now being made. The Sierra Madre will be crossed at an altitude of over 10,000 feet.

The Colorado Iron Works Company, of Denver, Colorado, is making a carload of steel jackets for the new copper furnaces of the Guggenheim Smelting Company, at Aguas Calientes. It has also recently made and shipped two silver-lead furnaces for the same company.

The Compania Mexicana Constancia, of Sierra Mojada, Coahuila, is to be congratulated, since some of its workmen in the weighing department, during the last days of May, accidentally pulled up some stones in a spot near the bridge of the railroad, about 200 meters from the Esmeralda smelter, and, greatly to their surprise, discovered the existence of leaden ores. Notice was at once given to General Manager Daniel Sada. This gentleman, in company with an English engineer, immediately proceeded to the spot, and both, after a minute and careful examination of the ground, started the work of exploration, the result of which was a great quantity of lead ore of a fairly good quality.

## GENERAL NEWS

### PATENTS.

Messrs. Hazard & Townsend, solicitors of patents, room 9 Downey Block, Los Angeles, California, report the following recent patents of interest to mining men:

June 23, 1896.—No. 562,681. Amalgamator. C. P. Patterson, Farmington, Utah.—A box having a gyratory motion is provided with copper plates located one above the other to form connecting chambers, and a guide strip extending in each chamber from one end to within a short distance of the other end, so that the material passes in one direction over one part of each plate, and returns in another direction over the other part of such plate.

June 30.—No. 562,882. Amalgamating Apparatus. J. A. Bentley, Denver, Colorado. A cylinder having its inner surface amalgamated is provided with detachable ends, and a rotatable cage is arranged to receive the cylinder to rotate it with the enclosed material.

June 30.—No. 563,119. Amalgamator. F. B. Austin, Tempe, Arizona.—An inclined sluice has in its bottom a pan provided with a cover, the pan and the cover being insulated from each other and each provided with projecting spikes; both the pan and the cover are charged with electricity, and the material sluiced therethrough.

June 30.—No. 563,234.—Apparatus for Reducing Antimony Ores. E. Kratzer, Thompson Falls, Montana.—The furnace has in its side draft-holes, and a cone formed with draft-channels is arranged in the furnace; branch pipes lead from the upper part of the furnace and enter an inclined pipe which empties the fumes into an elevated condenser, formed with solid floor and canvas sides.

June 30.—No. 563,143, and No. 563,144. Process of Extracting Copper from Ores. James Douglass, New York, N. Y.—The first process consists in taking solid cuprous chloride with water, inserting both electrodes of an electric circuit therein, and then passing an electric current therethrough. The second process consists in suspending in solid cuprous chloride, an electrolyte, inserting the cathode into the chloride and the anode into the electrolyte and passing the electric current therethrough.

June 30.—No. 563,145. Mill for Crushing and Grinding. W. Duffield and W. R. Taylor, London, England.—A vertical shaft is provided with an eccentric bearing, or crank, carrying a sleeve having cup-shaped sockets in which the spherical shaped ends of the grinding roller shafts are seated. The pan rotates beneath the grinding rollers, and as the shaft rotates the eccentric causes the rollers to travel from the inner portion of the pan to the outer portion, and vice versa.

June 30.—No. 563,046. Apparatus for Separating and Saving Gold. J. Mait, Oakland, California.—An inclined table having transverse grooves there across is arranged to oscillate from side to side and to bump up and down; stationary plates or spoons dip into the depressions and agitate the material therein.

June 30.—No. 562,021. Gold Washing Machine. E. J. Cowley, Boise, Idaho.—A cylindrical box is provided on its interior with amalgamating plates, and closed by a cover having a central opening. The material is introduced under pressure tangentially into the box and discharged at the center.

June 30.—No. 563,181. Ore Crushing Machine. E. P. Jones, San Francisco, Califor-



nia. Assignor to the Risdon Iron and Locomotive Works. This invention consists in arranging the discharge screens of a rotary grinder so they may be reversed.

June 30.—No. 563,101. Ore Sampler. T. A. Topham, Aspin, Colorado.—A rotary plate is provided with a chute, which, as the plate revolves passes through the discharging ore and allows a portion to pass through the plate and discharge into the sampler lot.

Copies of these patents may be obtained for five cents each (no stamps) by addressing the Commissioner of Patents, Washington, D. C. giving the date, number of patent, name of inventor and title of invention of each patent ordered.

#### A Government Smelter.

Mr. J. J. Crowley, supervising special agent of the treasury department, visited Nogales recently. One result of his visit will probably be the erection of a government sampling works there at the cost of not less than \$10,000. A late appropriation by Congress for the establishment of such works sets aside \$45,000 for three government works, one to be at El Paso, and the other two on the northern boundary. The act, though, provides for the erection of other works, or rather for the erection of additional facilities for the collection of customs, the expense of such additional facilities to be paid for not out of the appropriation, but out of the usual fixed fund for the maintenance of the custom service. An average of four tons of ore daily passes through the Nogales port. It would be impracticable to send it to El Paso for sampling, and its value at Nogales custom house could be only approximately determined with the existing facilities.

#### Books Received.

The new book, "The Champion Swindle, or New Light on the Silver Question," is from the pen of one of the brightest and most scholarly New England clergymen, a man up to date in his thinking and with the courage of his convictions. He began the study of this problem, a believer in the single gold standard, but with his vigorous mental habit of thinking for himself and on both sides of the question and to the very end, he found himself compelled by the logic of the facts, to come squarely over to the side of bimetalism. The book is already spoken of in the highest terms by those who have made a study of the problem, and it is hoped the general circulation of the facts and the logic of this work will help clarify the atmosphere and lead to a wise solution of the question. This book is a compact 16 mo, 96 pages, crowded with brilliant facts and logic. Price 10 cents; \$1.00 per dozen; \$5.00 per hundred; \$45.00 per thousand. Published by James H. Earle, Boston, Mass.

There were 78,330,773 pieces coined at the mints of the United States for the fiscal year just closed, the total coinage reaching a value of \$71,188,468. The gold pieces coined numbered 3,584,760, and were valued at \$58,878,490. The bulk of the gold coinage was of large pieces, there having been 2,593,723 double eagles coined, of the value of \$51,874,460. Of silver there were 20,424,529 pieces coined, which were valued at \$11,440,641. Of this amount silver dollars represented \$7,500,822, the next largest coinage of silver pieces being of quarters, which aggregated in value \$2,005,705. The minor coinage comprised 54,321,484 pieces, with a value of \$869,337. For the six months ending with June, showed a total value of \$31,846,372, of which \$22,523,572 was in gold, \$8,856,714 in silver, and \$466,088 in minor coins. A feature of the showing for the year is the fact that the bulk of the coinage of silver dollars was during the last six months, all but about \$400 having been coined during that period.

### PERSONAL-NEWS ITEMS

J. Mitchell, one of the main spokes of the Mexican Ore Co. of Mimilius, Mexico, returned Wednesday night, July 1st, from a two months' visit to his home in Fallmouth, Cornwall, England.

Mr. Metcalf of Eagle Cliff, was a caller at the JOURNAL office the 9th inst.

Hon. W. S. Hopewell of Hillsboro, N. M., was in Chicago to attend the convention.

Chas. M. Clark of Jerome, Arizona, was in Prescott Tuesday, July 7th.

Mr. J. D. Thompson of Yuma, Arizona, was in the city the 15th inst.

S. A. James, manager of the Dolores mine at Morales, Mex., left Chihuahua for the mines July 11th.

A. G. Kennedy left Prescott, Arizona, for California Monday, July 6th, on mining business.

L. H. Emerson of Pine Lake, San Bernardino Co., Cal., was a caller at the JOURNAL office the 13th inst.

Geo. W. Koster, a mining man of Kingman, Ariz., left there for Tuolumne county, Calif., July 10th.

John Weir, a mining man of New York City, was in Chihuahua, Mexico, last week.

Mr. Keeler of Eagle Cliff, Riverside county, was in Los Angeles July 9th.

Mr. C. D. Bonney went to the Jicarillas, near White Oaks, N. M., to look after some mining interests he has there.

Capt. Tevis of Bowie, Ariz., recently returned from a trip down into Sonora, Mex., where he went to examine a mining property in the interests of some local capitalists.

James Taylor, a mining man of Guaynopite, Chihuahua, Mex., was in the city of Chihuahua, the fore part of this week.

John P. Schmit, assayer and metallurgist of Bourne, Baker county, Oregon, was a caller at the JOURNAL office on the 14th inst. Mr. Schmit was formerly connected with the Borek and Excelsior mines at Bourne, Oregon.

S. P. Mahan was in Phoenix, Ariz., July 10th for a short visit. He has for some time been in California, more especially at Angels Camp.

F. Eeber, the head man of the mining department of the Kansas City Smelting and Refining Company, went down to Chihuahua, Mexico, from El Paso last week to look after some important mining business.

J. H. Gifford, an experienced miner and mill man of El Dorado county, was in Los Angeles, Calif., the last of the week.

Felix Vogel was in Silver City, N. M., from the Turquoise Camp, the last of June.

G. M. Hyams, of the Old Dominion Copper Mining and Smelting Company, of Globe, Arizona, whose visit there was productive of so much good, took his departure July 5th.

Thos. R. Sorin, of Tombstone, Ariz., is now in Bayard, Yavapai County, Arizona.

R. S. Tinin, who has some mines at Guaynopite, Chihuahua, Mexico, was in the City of Chihuahua, last week.

Prof. James Douglass spent several days in Globe, Arizona, inspecting the property of the Globe Mining Company. He found work progressing nicely under the direction of Superintendent E. H. Cook.

Thos. Agnew, the pioneer miner of Bishop, Inyo County, Cal., left that place for his mines on the upper San Joaquin, near the Minarets, the last part of last week.

Jose Marines, of Kingman, Ariz., was a caller at the JOURNAL office on the 11th inst. Mr. Marines has some claims near Kingman that runs 30 ounces in gold.

L. J. Court, a prospector from the southern part of Arizona, is at present in Williams, Arizona.

David Conner, a prospector recently from Greenwall, Kern County, Cal., returned to Los Angeles for a few days, the first part of this week.

Hon. Nick Galles, left Prescott, Arizona, July 6th, for California, on mining business.

S. M. Kelsey, of the Lost Horse Mining and Milling Company, near Banning, Riverside County, Cal., was in the city, July 15th, with some bullion from the desert.

J. W. Akers, a mining man of Santa Fe, N. M., was in Phoenix, Ariz., the first part of last week, on his way to Cave Creek, to inspect some mining properties at that place.

Joseph L. Giroux, superintendent of the United Verde Copper mines at Jerome, left Prescott, Ariz., for Los Angeles, Cal., July 5th.

Mr. Miller, of the Locklin-Miller mine, at South Pass, Arizona, was in Tombstone, the 5th inst., but returned to the mine the next day.

Superintendent John Martin, of the Little Jesse properties, near Prescott, Arizona, was in that city, Thursday, July 9th.

#### OBITUARY.

Marion Mitchell, superintendent of the Arizona Copper Company's works at Metcalf, Graham Co., was murdered by a Mexican July 2nd. Mitchell was justice of the Peace and had fined the Mexican, when the latter for revenge committed the deed.

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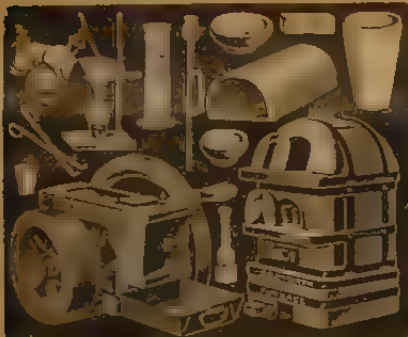
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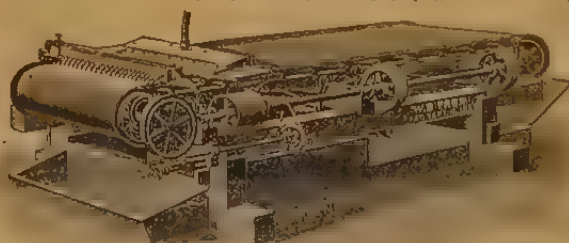
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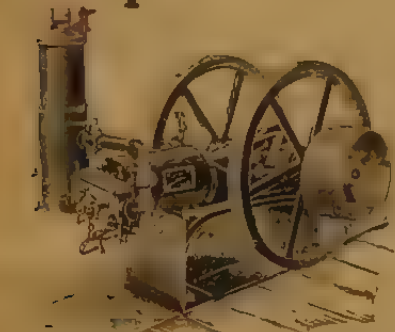
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**METAL MARKET.****New York Quotations.**

	SILVER	COPPER	BRASS
July 1	1.00	1.00	1.00
" 2	1.00	1.00	1.00
" 3	1.00	1.00	1.00
" 4	1.00	1.00	1.00
" 5	1.00	1.00	1.00
" 6	1.00	1.00	1.00
" 7	1.00	1.00	1.00
" 8	1.00	1.00	1.00
" 9	1.00	1.00	1.00
" 10	1.00	1.00	1.00
" 11	1.00	1.00	1.00
" 12	1.00	1.00	1.00
" 13	1.00	1.00	1.00
" 14	1.00	1.00	1.00
" 15	1.00	1.00	1.00
" 16	1.00	1.00	1.00
" 17	1.00	1.00	1.00
" 18	1.00	1.00	1.00
" 19	1.00	1.00	1.00
" 20	1.00	1.00	1.00

**MINING STOCK QUOTATIONS.**

Alloues	1.00	Franklin	12.00
Atlantic	10.00	Kearns	10.00
Boston & Mont	75.00	Oscoda	25.00
Butte & Boston	60.00	Quincy	115.00
Cal. & Hecla	300.00	Tamarack	25.00
Centennial	2.00	Wolverine	6.50

**COLORADO SPRINGS STOCKS**

Anaconda	60	Mollie Gibson	60
Blue Bell	60	Matos	15
Colfax	60	Mount Rose	18
Columbia	60	Ophir	18
Fanny Bowles	10	Orphan Bell	13
Gold King	60	Pharmacist	10
Gold and Globe	22	Portland	145
Isabella	60	Work	12
Jack Pot	60	World	60
Jefferson	18	Del Monte	60
Monarch	60		

**DENVER STOCK REPORT**

Alamo	60	Anaconda	60
Banquo	60	Atla	60
Bankers	11	Big Six	10
Croesus	60	Boston & Id	17
C. C. Con	13	Colfax	60
Chimbarazo	60	Gold & Globe	26
C. & O. C.	60	Mollie Gibson	75
Golden Fleece	1.00	Alt. Ross	19
Gold Standard	60	Pharmacist	10
Isabella	60	Union Gold	60

**HELENA, MONTANA**

Alice	25	Granite Mount	1.65
Bald Butte	3.55	Hope	1.50
Benton Group	10	Iron Mountain	40
Bi-Metallic	3.00	Ontario	1.00
Elizabeth	10	Poorman	40

**NEW YORK.**

Crown Point	45	Sierra Nevada	65
Con. Cal. & Va.	1.80	Standard	2.75
Gold & Curry	40	Union Con	50
Hale & Norcross	1.25	Iron Silver	18
Homestake	80	Quicksilver	3.00
Mexican	60	Quicksilver pld	17.00
Ontario	14	Sierra Nevada	65
Ophir	1.30	Yellow Jacket	25
Plymouth	20	Deadwood	45

**SAN FRANCISCO**

Alta	60	Mono	15
Belcher	60	Nevada Queen	60
Beat & Belcher	60	Ophir	1.25
Bodie Cos	5	Potosi	35
Chollar	60	Savage	30
Con. Cal. & Va.	1.40	Sierra Nevada	60
Crown Point	40	Union Con	50
Hale & Norcross	1.25	Utah	12
Mexican	45	Yellow Jacket	25
Gold & Curry	35	Bulwer	25

**ST. LOUIS.**

American Nettle	25	Elizabeth	20
Granite Mt.	1.60	Lco.	3
Adams	60	Hope	1.40
Bi-Metallic	3.30	Small Hopes	60

**SALT LAKE CITY**

Ajex	85	Eureka Hill	120.00
Altitude	50	Horn Silver	60.00
Am Nat G's	07	Little P.sburg	03
Anchor	2.25	Lucky Bl.	25
Apex	07	Mammoth	60.00
Bogan	25	Mexan	60
Bull Hk	6.00	Mexan	7.10
Cane Springs	80	New T. C.	60.00
Cent. Eureka	75.00	N. A. H.	2.25
Cleve. Con	45	N. A. H.	60
Cromwell	15	North Sp.	2.40
Cromwell	04	Oran	14.00
Darton	08	Silver King	18.25
Daly	8.50	Silver Sp.	1.00
Daly West	7.70	Tetro	08
Elko	20	Utah	1.25

**MEXICO**

Name of Company	Date	Price
Angstrom	Guadalupe	\$ 250
Asuriana y Anexas	Za. str. str.	440
Cerro de Chichu	Ch. str. str.	10
Concepcion y Anexas	S. Luis Potosi	200
El Oro	Guadalupe	60
do pre		00
Luz de Horda	Michacan	30
do pre		20
Luz de Maravillas	Hidalgo	200
Real del Monte		1.000
Rosario y Anexas	Purango	80
do pre		80
San Rafael del Oro	Guadalupe	60
San Gertr. y Anexas	Hidalgo	75
do pre		15
St. Mar de la Paz	S. Luis Potosi	30
Tasajo	Puebla	60
Zonitabua de Gold	Veracruz	60
Zonitabua de Silver	Guadalupe	70

NOTE: The above Mexican stocks are figured on the basis of Mexican values.



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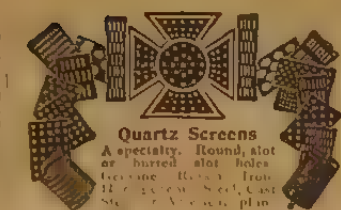
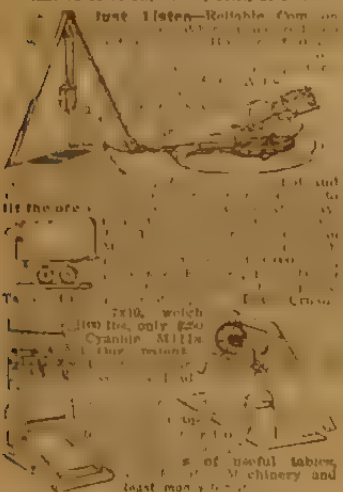
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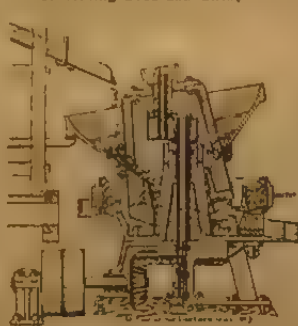
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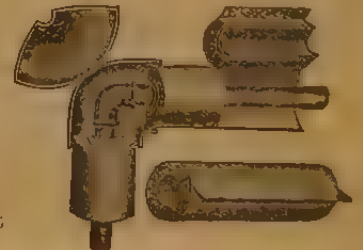
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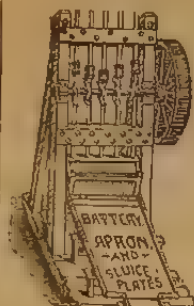
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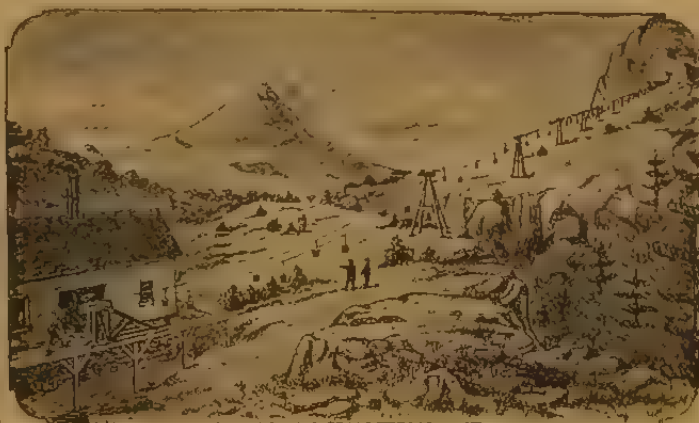
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- 4th. Saves much space.

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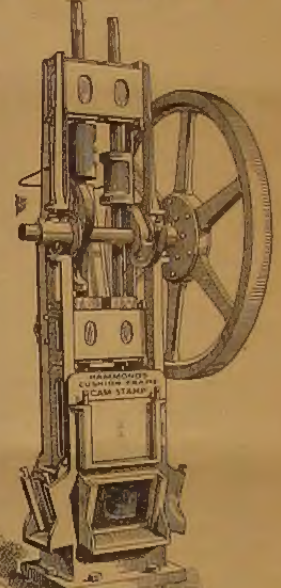
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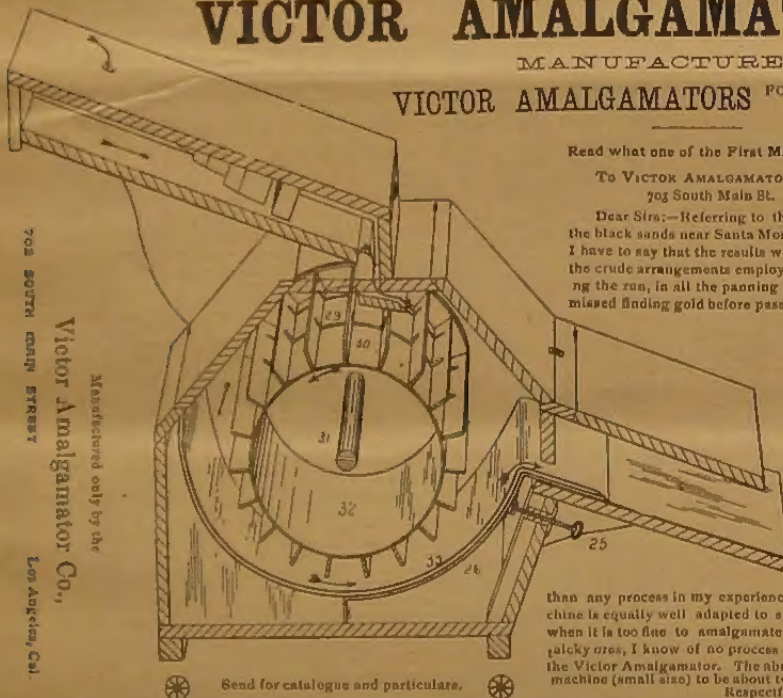
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Guaymas, Mex.	El Paso	10.00	11.50	13.50	
	Pueblo	13.50	15.00	17.00	
	Kansas City	15.00	16.50	18.50	
Ortiz, " "	El Paso	9.50	11.00	13.00	
	Pueblo	12.50	14.00	16.00	
	Kansas City	14.00	15.50	17.50	
Torres, " "	El Paso	9.00	10.50	12.50	
	Pueblo	11.50	13.00	15.00	
	Kansas City	13.00	14.50	16.50	
Hermosillo, " "	El Paso	8.50	10.00	12.00	
	Pueblo	10.50	12.00	14.00	
	Kansas City	11.50	13.00	15.00	
Pescuira, " "	El Paso	8.00	9.50	11.50	
	Pueblo	10.00	11.50	13.50	
	Kansas City	11.00	12.50	14.50	
Querobahl, " "	El Paso	7.00	8.50	10.50	
	Pueblo	9.00	10.50	12.50	
	Kansas City	10.00	11.50	13.50	
Magdalena, " "	El Paso	6.50	8.00	10.00	
	Pueblo	8.50	10.00	12.00	
	Kansas City	9.50	11.00	13.00	
Imuris, " "	El Paso	6.00	7.50	9.50	
	Pueblo	8.00	9.50	11.50	
	Kansas City	9.00	10.50	12.50	
Nogales, A. T.	El Paso	5.50	7.00	9.00	
	Pueblo	7.50	9.00	11.00	
	Kansas City	8.50	10.00	12.00	
Calabasas, " "	El Paso	5.00	6.50	8.50	
	Pueblo	7.00	8.50	10.50	
	Kansas City	8.00	9.50	11.50	
Sanford, " "	El Paso	4.50	6.00	8.00	
	Pueblo	6.50	8.00	10.00	
	Kansas City	7.50	9.00	11.00	
Crittenden, " "	El Paso	4.00	5.50	7.50	
	Pueblo	6.00	7.50	9.50	
	Kansas City	7.00	8.50	10.50	
Fairbank, " "	El Paso	3.50	5.00	7.00	
	Pueblo	5.50	7.00	9.00	
	Kansas City	6.50	8.00	10.00	
Tucson, " "	El Paso	3.00	4.50	6.50	
	Pueblo	5.00	6.50	8.50	
	Kansas City	6.00	7.50	9.50	
Benson, " "	El Paso	2.50	4.00	6.00	
	Pueblo	4.50	6.00	8.00	
	Kansas City	5.50	7.00	9.00	
Steins Pass, N.M.	El Paso	2.00	3.50	5.50	
	Pueblo	4.00	5.50	7.50	
	Kansas City	5.00	6.50	8.50	
Lordsburg, " "	El Paso	1.50	3.00	5.00	
	Pueblo	3.50	5.00	7.00	
	Kansas City	4.50	6.00	8.00	
Silver City, " "	El Paso	1.00	2.50	4.50	
	Pueblo	3.00	4.50	6.50	
	Kansas City	4.00	5.50	7.50	
Hudson, " "	El Paso	0.50	2.00	4.00	
	Pueblo	2.50	4.00	6.00	
	Kansas City	3.50	5.00	7.00	
Deming, " "	El Paso	0.00	1.50	3.50	
	Pueblo	2.00	3.50	5.50	
	Kansas City	3.00	4.50	6.50	
Florida and Lake Valley, " "	El Paso	0.00	1.00	3.00	
	Pueblo	2.00	3.00	5.00	
	Kansas City	3.00	4.00	6.00	
Null, " "	El Paso	0.00	0.50	2.50	
	Pueblo	2.00	2.50	4.50	
	Kansas City	3.00	3.50	5.50	
El Paso, " "	El Paso	0.00	0.00	2.00	
	Pueblo	2.00	2.00	4.00	
	Kansas City	3.00	3.00	5.00	
Las Cruces, " "	El Paso	0.00	0.00	1.50	
	Pueblo	2.00	2.00	4.00	
	Kansas City	3.00	3.00	5.00	
Rincon, " "	El Paso	0.00	0.00	1.00	
	Pueblo	2.00	2.00	4.00	
	Kansas City	3.00	3.00	5.00	

FROM

TO

Car Loads, in dollars and cents per ton of 2,000 lbs.

Ore Concentrates.

Valuation not to exceed \$50 per ton.

Valuation not to exceed \$100 per ton.

Valuation not to exceed \$250 per ton.

Lead Bullion, valuation not to exceed \$100 per ton.

Base Metal, Copper Matte, Bar and Black Copper, valuation not to exceed \$300 per ton.

A. T. &amp; S. F. R. R.

ATLANTIC &amp; PACIFIC RAILROAD

## Rates on Copper or Zinc Ore to Canon City.

Taking Effect July 1st, 1891.—So far as rates on Copper or Zinc Ores are concerned, Canon City, Col., will be considered as common with Pueblo; in other words the rates shown in Tariff as applying on shipments of Ore to Pueblo, will also apply on shipments of Copper or Zinc Ore to Canon City.

In the absence of positive information as to the value of Ore, Ore Concentrates, or Base Metal, Agents will bill at rates sufficiently high to protect the Company. These rates can be corrected when evidence of actual value is produced.

The market price at destination, to be verified by assays made

by the Railroad Company, at owner's expense, will govern the value and determine the rate.

Agents must cause shippers to understand the condition upon which these rates are based, and should make their receipts read: "Rates subject to correction according to value at destination."

These rates only apply on lots of ten tons or over. On lots of four tons and under ten, 50 per cent, and on lots of one ton and less than four, 40 per cent will be added to above rates. Base Metal, Copper Matte and Ore Concentrates, in lots of less than one ton, will take first-class rates from all the above points, except when the rate based on valuation makes it higher, that rates on small lots of high value may not be less than the rates when in lots of one ton or over as above.

Charges on Ore in car-loads must be guaranteed, and on lots less than a car-load must in all cases be prepaid.

**Omaha Rates.**—The Rates to Omaha, Neb., all grades, will be \$1 per ton higher than the rates to Kansas City.

**Note.**—All shipments of Ore and Concentrates valued not to exceed \$50 per ton must be billed at the rate for Ore and Concentrates, "Valuation over \$50 not to exceed \$100 per ton," and shipping receipt must be issued by agent at said rate. Agent at destination is authorized to correct to rate for Ore and Concentrates, "Valuation not to exceed \$50 per ton," upon presentation of properly certified smelter returns, showing that the value does not exceed \$50 per ton.

Intermediate points not named will take rates provided for next station beyond.

## SOUTHERN CALIFORNIA RAILWAY.

Rate on Ore in car loads, valuation not to exceed \$50 per ton, minimum weight 24,000 lbs. Oro Grande, Cal., to Pueblo, Col., \$10.30 per ton.

Same, Victor, Cal., to Pueblo, \$10.35 per ton.

Ore, car loads, when coming from the Republic of Mexico valuation not to exceed \$50 per ton; San Diego or National City to Denver, Col., and Pueblo, Col., \$12 per ton of 2,000 lbs.

Ore, valuation not to exceed \$100 per net ton and so receipted for, minimum weight 30,000 lbs. 75c per net ton, to Denver and Pueblo, Col., from all points on the Southern California Railway.

## ORE TARIFF.

From Points in New Mexico, Arizona and California, to  
El Paso, San Francisco and Vallejo Junction.

## SOUTHERN PACIFIC R. R. COMPANY.

FROM	TO	Valuation not to exceed \$25 per ton.			
		Valuation not to exceed \$50 per ton.	Valuation not to exceed \$100 per ton.	Valuation not to exceed \$200 per ton.	Lead Bullion, Copper Matte, Bar and Black Copper, valuation not to exceed \$300 per ton.
El Paso, Tex.	San Francisco	7.00	8.10	9.10	11.20
Deming, N.M.	El Paso	2.00	2.00	2.20	2.20
Gage, " "	El Paso	2.00	2.00	2.20	2.20
Separ, " "	El Paso	2.00	2.00	2.20	2.20
Lordsburg, " "	El Paso	2.50	3.00	3.00	3.60
Steins Pass, " "	El Paso	2.50	3.00	3.00	3.60
Bowls, A. T.	El Paso	3.00	3.60	3.60	4.40
Willcox, " "	El Paso	3.00	4.00	4.00	5.00
Dragoon Summit, " "	El Paso	3.00	4.00	4.00	5.00
Benson, " "	El Paso	3.50	4.35	4.35	5.00
Tucson, " "	El Paso	3.50	4.35	4.35	5.00
Casa Grande, " "	El Paso	4.00	5.00	5.00	6.00
Maricopa, " "	El Paso	4.00	5.00	5.00	6.00
Gila Bend, " "	El Paso	4.00	5.00	5.00	6.00
Aztec, " "	El Paso	4.00	5.00	5.00	6.00
Gila City, " "	El Paso	4.00	5.00	5.00	6.00
Yuma, " "	El Paso	4.00	5.00	5.00	6.00
Newhall, Cal.	San Francisco	5.00	6.00	6.00	7.00
Mojave, " "	San Francisco	5.00	6.00	6.00	7.00
Calliente, " "	San Francisco	5.00	6.00	6.00	7.00
Milton, " "	San Francisco	5.00	6.00	6.00	7.00
Hollister, " "	San Francisco	5.00	6.00	6.00	7.00

These rates apply only on lots of twelve tons or over. On lots of four tons and under twelve, 50 per cent, and on lots of one ton and less than four 40 per cent will be added to the above rates.

Vallejo Junction takes same rate as San Francisco.



# THE PUEBLO Smelting and Refining Company,

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All ores, without exceptions, amenable to cyanide treatment, can be treated to better advantage by the Kendall Process. This can be accepted as an axiom.

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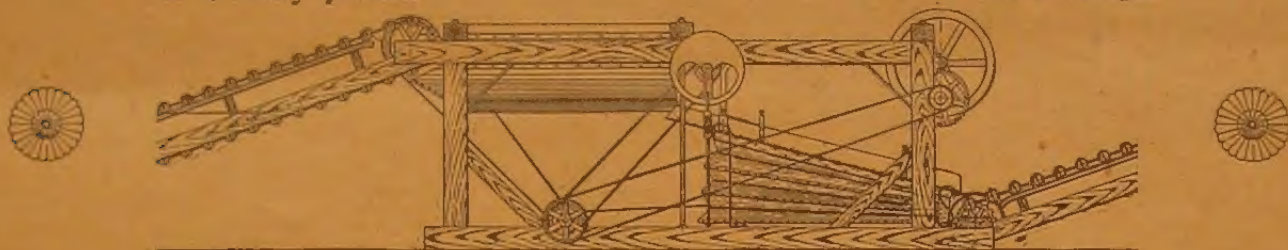




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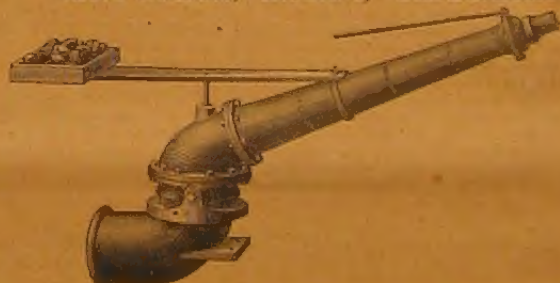
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